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40. (new) The method of Claim 38 wherein the antibody is a recombinant antibody or fragment thereof.

41. (new) The antibody or fragment of Claim 40 which is a chimeric antibody or a CDR-grafted antibody.

Sub E1  
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thereof.

42. (new) The composition of Claim 38 which comprises a human antibody or fragment thereof.

43. (new) The antibody or fragment of Claim 42 prepared by immunization of a transgenic animal capable of producing human antibodies.

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44. (new) The method of Claim 38 wherein the antibody or fragment thereof binds to an epitope on the extracellular domain or to an epitope on a fragment of the extracellular domain of an osteoprotegerin binding protein.

45. (new) The antibody or fragment of Claim 44 wherein the epitope comprises the BB' loop of an osteoprotegerin binding protein.

46. (new) The antibody or fragment of Claim 44 wherein the epitope comprises the EF loop of an osteoprotegerin binding protein.

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47. (new) The method of Claim 38 wherein the antibody or fragment further comprises a composition comprising a pharmaceutically acceptable diluent, carrier, solubilizer, emulsifier, preservative and/or adjuvant.

48. (new) The method of any of Claims 37-47 further comprising administering a bone morphogenic factor selected from the group consisting of BMP-1 to BMP-12, transforming growth factor- $\beta$ , a transforming growth factor- $\beta$  family member, a fibroblast growth factor selected from the group consisting of FGF-1 to FGF-10, an interleukin-1 inhibitor, a TNF $\alpha$  inhibitor, parathyroid hormone, an E series prostaglandin, a bisphosphonate, or a bone-enhancing mineral.

49. (new) The method of any of Claims 37-48 wherein the bone disease is selected from the group consisting of osteoporosis, osteomyelitis, hypercalcemia, osteopenia brought on by surgery or steroid administration, Paget's disease, osteonecrosis, bone loss due to rheumatoid arthritis, periodontal bone loss, osteopenia due to immobilization, prosthetic loosening and osteolytic metastasis.

REMARKS

The Restriction Requirement

The Examiner has required that the claims be restricted to one of the following inventions under 35 U.S.C. 121:

- I. Claims 1, 2 and 4-15 drawn to nucleic acids encoding osteoprotegerin binding protein.